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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/684,463	10/06/2000	Timothy H. Daubenspeck	BUR9-2000-0075-US1	4044

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EXAMINER

SEFER, AHMED N

ART UNIT PAPER NUMBER

2826

DATE MAILED: 10/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/684,463

Applicant(s)

DAUBENSPECK ET AL.

Examiner

A. Sefer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 9-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in Paper No. 5 is acknowledged.

The traversal is on the ground(s) that the search and the examination of the entire application can be made without serious burden. This is not found persuasive because inventions II and I are distinct and would be a serious burden. Hence, the requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-3 rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi (JP 8-274178).

Takahashi discloses in figs. 1-3 a semiconductor device comprising a substrate 11; at least one fuse 13 formed within the substrate; and an etch resistant layer over the at least one fuse.

As to claims 2 and 3, Takahashi discloses an alignment mark 14 comprising an etch resistant layer (as in claim 3) formed on the substrate at a location spatially removed from the fuse.

4. Claims 1-4 rejected under 35 U.S.C. 102(b) as being anticipated by Motsiff et al. US Patent No. 5,731,624.

Motsiff et al disclose in fig. 1 a semiconductor device comprising a substrate 1; at least one fuse 8 formed within the substrate; and an etch resistant layer 9 over the at least one fuse.

As to claims 2 and 3, Motsiff et al disclose an alignment mark 7 comprising an etch resistant layer (as in claim 3) formed on the substrate at a location spatially removed from the fuse.

As to claims 4, Motsiff et al disclose a fuse and alignment mark formed within a metal wiring layer of the device.

5. Claims 1-3 and 5-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Narayan et al. US Patent No. 6,127,721.

Narayan et al disclose (see figs. 1 and 2 and col. 3, lines 41-50) a semiconductor

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device comprising a substrate 101; at least one fuse 120 formed within the substrate; and an etch resistant layer 130 or silicon nitride (as in claim 7) having a thickness which falls within a range recited in the claim (as in claim 8) over the at least one fuse.

As to claims 2 and 3, Narayan et al disclose (see col. 3, lines 1-6) an alignment mark comprising an etch resistant layer (as in claim 3) formed on the substrate at a location spatially removed from the fuse.

As to claims 5 and 6, Narayan et al disclose (see col. 3, lines 8-20) at least one insulative layer 142 above the etch resistant layer, wherein the etch resistant layer has a slower rate than that of the at least one insulative layer thereabove.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Shinomiya (JP 11-214389) discloses a structure device having a nitride layer formed over a fuse element.
- b. Sakota et al (JP 1-225135) disclose (see fig. 1) a semiconductor device with an improved operation of a melting fuse.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (703) 605-1227.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on (703) 308-6601.

ANS

September 26, 2002

NATHAN J. FLYNN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

A handwritten signature in black ink, appearing to be 'N. J. Flynn', written over the printed name and title.